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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,216	09/16/2003	Jung-Yi Yang	11107-US-PA	2215

31561 7590 06/26/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE  
7 FLOOR-1, NO. 100  
ROOSEVELT ROAD, SECTION 2  
TAIPEI, 100  
TAIWAN

EXAMINER

LIANG, REGINA

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/605,216	YANG, JUNG-YI	
	Examiner	Art Unit	
	Regina Liang	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/6/06</u>  | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano (US 6,097,444) in view of Neugebauer et al (US 6,473,131 hereinafter Neugebauer).

As to claim 1, Fig. 9 of Nakano display a phase adjusting method of an A/D converter, comprising setting a phase reference (a fixed phase); applying the phase reference to convert a first analog video frame to a first digital video frame and collecting a first set of pixel value of the plurality of predetermined positions from the first digital video frame (pixel data outputted from the A/D converter for at least a predetermined part within a first frame are sampled at a fixed phase, col. 1, lines 27-29); applying the phase reference to convert a second analog video frame to a second digital video frame and collecting a second set of pixel value of the plurality of predetermined position from the second digital video frame (col. 1, lines 29-32, which states "A frame which appears n frames later than the first part within the second frame as within the first frame are sampled at the abovementioned phase"); calculating a display difference between corresponding pixels in the first set and the second set of pixel value ; obtaining another phase reference and doing the above procedures over again to obtain another display difference, choosing a target phase reference and applying the target phase reference to convert a following analog video frame (col. 1, lines 32-52).

Nakano does not disclose the calculating by adding up the differences between corresponding pixels and choosing the target phase reference that produce a smallest display reference. However, Fig. 5 of Neugebauer teaches a phase adjusting method of an A/D converter comprising sampling pixel values frame by frame, obtaining the sum (adding up) of the video pixel values over the frame using sample points (step 502), calculating the variance (differences) of the mean over m frames, choosing the target phase reference ("Best Phase" at step 506) that produce a smallest display reference (504). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nakano to have the calculating by adding up the differences between corresponding pixels and choosing the target phase reference that produce a smallest display reference as taught by Neugebauer since this improves the quality of conversion of the analog electronic signal to a digital representation thereof and avoids edges and avoids noisy portions of the flat region (col. 2, lines 47-49 and col. 9, lines 64-66 of Neugebauer).

As to claim 7, note the discussion of claim 1 above.

As to claims 2, 8, Nakano as modified by Neugebauer does not disclose the pixel values of the plurality of predetermined positions are at four corners and a center of the digital video frame. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nakano as modified by Neugebauer to apply the pixel values of the plurality of predetermined positions are at four corners and a center of the digital video frame as claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Art Unit: 2629

As to claims 3, 9, Nakano teaches the first video frame and the second video frame are consecutive frames (col. 1, lines 27-30).

As to claims 4, 10, Nakano teaches "the pixel data for at least a predetermined part within a first frame are sampled at a fixed phase and then stored in a first memory" (this corresponds to before obtaining digital video frame, a delay occurs for storing the digital video frame to a frame buffer memory).


As to claims 5, 11, Neugebauer teaches an average calculating method is applied to obtain average values (col. 8, lines 30-40).

As to claims 6, 12, Neugebauer teaches a best phase reference for A/D converter produces a smallest average values (504 in Fig. 5).

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Regina Liang  
Primary Examiner  
Art Unit 2674

6/22/06